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section unit, and the main control section provides an ON/OFF control signal to each of the unit side control section units to perform ON/OFF control of the load voltage supply to the load.

REMARKS

INTRODUCTION:

Claims 2-3 were rejected under 35 U.S.C. § 103.

These rejections are respectfully traversed and reconsideration is requested.

In accordance with the foregoing, claims 2 and 3 have been amended, and new claims 6 and 7 have been added.

No new matter is being presented, and approval and entry of the foregoing amendments is requested.

Claims 2-3 and 6-7 are pending and under consideration. Reconsideration is requested.

ENTRY OF AMENDMENT UNDER 37 C.F.R. §1.116:

Applicant(s) request(s) entry of this Rule 116 Response because:

(a) it is believed that the amendment of claims 2-3 puts this application into condition for allowance as suggested by the Examiner;

(b) the amendments were not earlier presented because the Applicant believed in good faith that the cited prior art did not disclose the present invention as previously claimed;

(c) the amendment of claims 2-3 and addition of new claims 6-7 should not entail any further search by the Examiner since no new features are being added or no new issues are being raised; and

(d) the amendments do not significantly alter the scope of the claims and place the application at least into a better form for purposes of appeal. No new features or new issues are being raised.

The Manual of Patent Examining Procedures sets forth in Section 714.12 that "any amendment that would place the case either in condition for allowance or in better form for appeal may be entered." Moreover, Section 714.13 sets forth that "the Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

REJECTION UNDER 35 U.S.C. §103:

In the Office Action at pages 2-3, the Examiner rejected claims 2-3 under 35 U.S.C. §103 over AAPA in view of Linde (USPN 5,745,670; hereafter referenced as Linde) and Kim (USPN 5,886,424; hereafter referenced as Kim). The rejection is respectfully traversed and reconsideration is requested.

Claims 2 and 3 have been amended to set forth the present invention more clearly.

It is respectfully submitted that in FIG. 5 of AAPA (see also lines 4-6 of page 15 of the specification), when the control power supply unit 15₁ fails, both functions of the main power supply control section 13₁ and the unit side control section 17₁ stop simultaneously, causing an extremely serious problem from a maintenance point of view since the abnormality in the power supply unit 11₁ cannot totally be recognized in the main control section 30. In contrast, in an embodiment of the present claimed invention, redundant control power supply units supply power to a unit side control unit that sends a control voltage to a main power supply control unit to activate generation of an output voltage by the main power supply unit and reports main power supply unit abnormality problems to a main control section, avoiding the problems encountered by AAPA of FIG. 5.

In FIG. 6 of AAPA (see also lines 13-25 of page 15), when the control power supply unit 15₁ fails, external control power supplies 50₁ and 50₂ are separately provided, requiring extra space and cables and thus more cost, to provide backup power to the unit side control section 17₁, which then provides a control voltage to the main power supply control section 13₁, bypassing the use of the control power supply unit 15₁. However, this solution is expensive, and does not provide for continuing operation of the main power supply unit if power to the unit side control section 17₁ also fails to be provided by the control power supply unit 15₁ and the external control power supplies 50₁ and 50₂. In contrast, in an embodiment of the present invention, if the control power supply unit 15₁ fails and if the external control power supplies 50₁ and 50₂ also fail, the control power supply units 15_{2-n} provide parallel redundancy to provide control power to the unit side control section 17₁ so that operation of the main power supply unit 12₁ continues despite the multiple failures. Thus, in contrast to the conventional structures, an embodiment of the present invention provides redundancy of the unit side control sections 17₁ -17_n with nearly complete certainty of notification of the main control unit external to the plurality of power supply units to provide an ON/OFF signal or when an abnormality in output of the main power supply occurs, to report the abnormality so that the problem can be addressed immediately.

Linde teaches a local power supply 12' that has only one control logic unit 30' in each device (e.g., unit #1) that controls the power distribution for the local power supply 12'. Linde fails to teach or suggest a main control section coupled to all of the devices to control a local power supply output of each of the devices and also fails to teach or suggest redundant control units of each power supply unit to send a control voltage to a unit side control section unit of each power supply unit to activate generation of an output voltage by the main power supply unit, as in an embodiment of the present claimed invention.

Kim teaches a single DC selection circuit 23 that implements one control logic unit 23c (see FIG. 8) to determine whether to utilize line voltage or battery voltage, each suitably converted to the desired voltage level. Kim does not teach or suggest redundant control units of each power supply unit to send a control voltage to a unit side control section unit to activate generation of an output voltage by the main power supply unit, as in an embodiment of the present claimed invention.

Thus, it is respectfully submitted that AAPA, Linde, and Kim, alone or in combination, fail to teach or suggest the present claimed invention. Since amended claim 3 depends from amended claim 2, claim 3 is deemed to be allowable for at least the reasons that claim 2 is allowable. Hence, claims 2 and 3 are submitted to be allowable under 35 U.S.C. §103 over AAPA in view of Linde and Kim.

NEW CLAIMS:

New claims 6 and 7 been added to recite the present invention more clearly. No new matter is added. It is respectfully submitted that the new claims distinguish over the prior art.

ATTACHMENT

Attached hereto is a "Version With Markings to Show Changes Made," comprising a marked-up version of changes made to the Claims by the current amendment.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot, and further, it is respectfully submitted that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any additional fees associated with the filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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